

CLAIMS

1. An apparatus for attaching an electrical cable to and making an electrical connection with a mounting post on a vehicle battery, comprising:
 - a base portion having an aperture extending therethrough between a first end and a second end thereof, said first end sized to be placed over the mounting post;
 - an insert received in said second end of base portion, said insert operable to make an electrical connection with the mounting post;
 - a cap having an open end sized to receive said base portion and a closed end;
 - a spring received in said base and compressed between an upper surface of said insert and an interior surface of said closed end of said cap; and
 - at least one stop member attached to said base portion, said stop member interacting with said cap to lock said cap in position with respect to said base when said spring is compressed, maintaining compression on said spring and urging said insert into contact with the mounting post to ensure an electrical connection between said insert and the mounting location.
2. The apparatus according to claim 1 including an electrical cable attached to said insert and extending from said apparatus for attachment to an electrical system.
3. The apparatus according to claim 1 wherein said insert is a split conical insert.

4. The apparatus according to claim 1 wherein said stop member interacts with a groove formed in an exterior surface of said cap.
5. The apparatus according to claim 4 wherein said groove extends at an angle between said closed end and said open end of said cap.
6. The apparatus according to claim 5 wherein said groove includes a locking portion at an end thereof.
7. The apparatus according to claim 4 wherein said groove extends substantially vertically between said closed end and said open end of said cap.
8. The apparatus according to claim 7 wherein said groove includes a locking portion at an end thereof.
9. The apparatus according to claim 1 wherein said stop member is releasably attached to said base portion.
10. A battery assembly for supplying electrical power to a vehicle electrical system, comprising:
 - a battery having at least one mounting post extending therefrom; and
 - at least one attachment assembly including,
 - a base portion having an aperture extending therethrough between a first end and a second end thereof, said first end sized to be placed over the at least one mounting post;
 - an insert received in said second end of base portion, said insert operable to make an electrical connection with the at least one mounting post;
 - a cable electrically connected to said insert at one end and to a vehicle electrical system at another end;

a cap having an open end sized to receive said base portion and a closed end;
 a spring received in said base and compressed between an upper surface of said insert and an interior surface of said closed end of said cap; and
 at least one stop member attached to said base portion, said stop member interacting with said cap to lock said cap in position with respect to said base when said spring is compressed, maintaining compression on said spring and urging said insert into contact with the at least one mounting post to ensure an electrical connection between said insert and the at least one mounting post and a supply of electrical energy to the vehicle electrical system.

11. The assembly according to claim 10 wherein said at least one battery post extends outwardly from an upper surface of said battery.

12. The assembly according to claim 10 wherein said insert is a split conical insert.

13. The assembly according to claim 10 wherein said stop member interacts with a groove formed in an exterior surface of said cap.

14. The assembly according to claim 13 wherein said groove extends at an angle between said closed end and said open end of said cap.

15. The assembly according to claim 14 wherein said groove includes a locking portion at an end thereof.

16. The assembly according to claim 13 wherein said groove extends substantially vertically between said closed end and said open end of said cap.

17. The assembly according to claim 16 wherein said groove includes a locking portion at an end thereof.

18. The assembly according to claim 10 wherein said stop member is releasably attached to said base portion.

19. A battery assembly for supplying electrical power to a vehicle electrical system, comprising:

a battery having a pair of mounting posts extending from an upper surface thereof; and

a pair of attachment assemblies, each of said attachment assemblies including,

a base portion having an aperture extending therethrough between a first end and a second end thereof, said first end sized to be placed over a respective one of the mounting posts;

an insert received in said second end of base portion, said insert operable to make an electrical connection with the respective one of the mounting posts;

a cable electrically connected to said insert at one end and to a vehicle electrical system at another end;

a cap having an open end sized to receive said base portion and a closed end;

a spring received in said base and compressed between an upper surface of said insert and an interior surface of said closed end of said cap; and

at least one stop member attached to said base portion, said stop member interacting with said cap to lock said cap in position with respect to said base when said spring is compressed, maintaining compression on said spring and urging said insert into contact with the at least one mounting post to ensure an electrical connection between said insert and the respective one of the mounting posts and a supply of electrical energy to the vehicle electrical system.